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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,195	06/23/2003	Jaung-Joo Kim	SEC.1013	6419
20987	7590	08/03/2005	EXAMINER	
VOLENTINE FRANCOS, & WHITT PLLC ONE FREEDOM SQUARE 11951 FREEDOM DRIVE SUITE 1260 RESTON, VA 20190			EL ARINI, ZEINAB	
			ART UNIT	PAPER NUMBER
			1746	

DATE MAILED: 08/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/601,195

**Applicant(s)**

KIM ET AL.

**Examiner**

Zeinab E. EL-Arini

**Art Unit**

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/10/05, 6/3/04, 6/23/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group II, claims 6-25 in the reply filed on 07/13/05 is acknowledged.

### ***Specification***

2. The abstract of the disclosure is objected to because it is not directed to a method of cleaning ceramic parts as claimed herein. Also at line 7, "removal from the ceramic parts dipping the parts" is confusing term. Correction is required. See MPEP § 608.01(b).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torii et al. (5,972,862) in combination with Tan (6,810,887) and Hightower et al. (3,033,710).

Torii et al. disclose a method for cleaning ceramic parts on which plasma reaction by products are adsorbed. The method comprises dipping the parts into a solution comprises fluoric salt, organic acid, organic solvent, water, and rinsing the parts. The reference discloses the ammonium fluoride, organic acid, the organic solvent, and the temperature as claimed. See the abstract, col. 10,

lines 3-46, col. 12, lines 1-18, Examples 7, 9, and the claims.

Torii et al. do not teach treating the ceramic parts with heat, the concentration, the time, and dipping the ceramic parts into alkaline solution after dipping the parts into the cleaning solution, and the ultrasonic as claimed.

Tan discloses a method for cleaning semiconductor fabrication equipment parts comprising cleaning the parts with HF/HNO<sub>3</sub> cleaning bath, rinsing the parts, and treating the parts with heat to remove the moisture from the parts. The reference discloses using the ultrasonic as claimed. See the claims, col. 12, lines 7-53.

It would have been obvious for one skilled in the art to use the ultrasonic and the heating step taught by Tan in

the Torii et al. process to remove any moisture from the parts and to improve the cleaning process.

Torii et al. and Tan do not teach dipping the parts in the basic solution as claimed.

Hightower et al. disclose a method for cleaning objects comprising treating the object in a first bath comprises acid solution, and then immersing the articles in a second bath containing alkaline solution. The reference teaches the sodium hydroxide as claimed. See claim 18. See also claims 3, 5, 8, and 22.

It would have been obvious for one skilled in the art to use the alkaline solution taught by Hightower et al in the Torii et al. in combination with Tan process to neutralize any acid solution adheres to the parts.

It would have been obvious for one skilled in the art to adjust the concentration, and the time to obtain optimum results.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zeinab E. EL-Arini whose telephone number is (571) 272-1301. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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*Zeinab El-Arini*  
Zeinab E. EL-Arini  
Primary Examiner  
Art Unit 1746

ZEE  
08/01/05